

**Jetstream 31 (J31) Flight Report for INTEX-B/MILAGRO**  
**Flight VER02 flown 5 Mar 2006**

A complete version of this report is posted at  
<http://www.espo.nasa.gov/intex-b/flightplanningJ31.cgi>

Overview

This was the second J31 flight out of Veracruz airport. Preflight goals focused on getting AOD profiles and transects, SSFR fluxes, CAR circles, and RSP legs in cloud-free conditions over the Gulf in association with Terra overpass.

Engines on: 1530 UT  
Engines off: 1800 UT

Takeoff: 1555 UT  
Land: 1754 UT

1633 UT Terra overpass

Cabin crew: Billings, Cairns, Gatebe, Redemann (flight scientist), Schmidt.

Pilot Summary

Flew different from plan to avoid clouds. (See flight track in Fig. 1.) No ATC problem with change. Airplane worked fine.

Discussion of flight

Flight Scientist: Really good flight. Communication in cabin very good. Communication with pilot passed to CAR scientist for CAR maneuvers. Offered to RSP, declined.

AOD small, ~0.14 max. Gradient 0.05. Ocean surface dark & calm.

5 CAR turns took 15 min.

RSP legs worked well.

Instrument Performance Summary

AATS: Worked fine. Tracked well. No evident temperature changes. Window clean at end of flight.

CAR: Worked well, beginning to end. Got BRDF over ocean, clouds to one side. Good communication w pilots. Orbits were just as wanted.

POS: Thumbs up. Heading on 200° leg jumped by ~5-10 deg—needs to be checked.

NavMet: Looked good—no problems. See data in Fig. 2.

RSP: Worked fine except SWIR detectors (no LN cooling). Need to rewrite instructions on activating cover.

SSFR: OK. Took dark readings during spiral down & on transits out & in.

Flight Path, Timing, and Measurements (all times UT [VER local +6])

1557 10,500', transit to WP off VER  
1611 10,500', spiral down to 200', adjusting spiral to avoid wispy cloud  
1622 200', low-level leg, 39 deg heading  
1626 POS heading seemed to change to 29 deg during low level run without pilots changing direction. Need to check POS file.  
1630 200', AOD low ~0.1  
1634 AOD gradient 0.08 to 0.13. Ocean dark & calm.  
1642 drop in AOD  
1644 Ascend to 2,000' for CAR maneuvers.  
1647 2,000', start CAR circles @2,000', 20 deg bank. AOD ~0.05  
1704 6,000', Ascend to 6,000' for RSP legs.  
1708 8,000', Ascend to 8,000'.  
1710 8,000', RSP leg, principal plane, 5 min, maneuver to intersect 1<sup>st</sup> leg perpendicular.  
1728 8,000', end of RSP leg 2  
1729 9,500', RTB

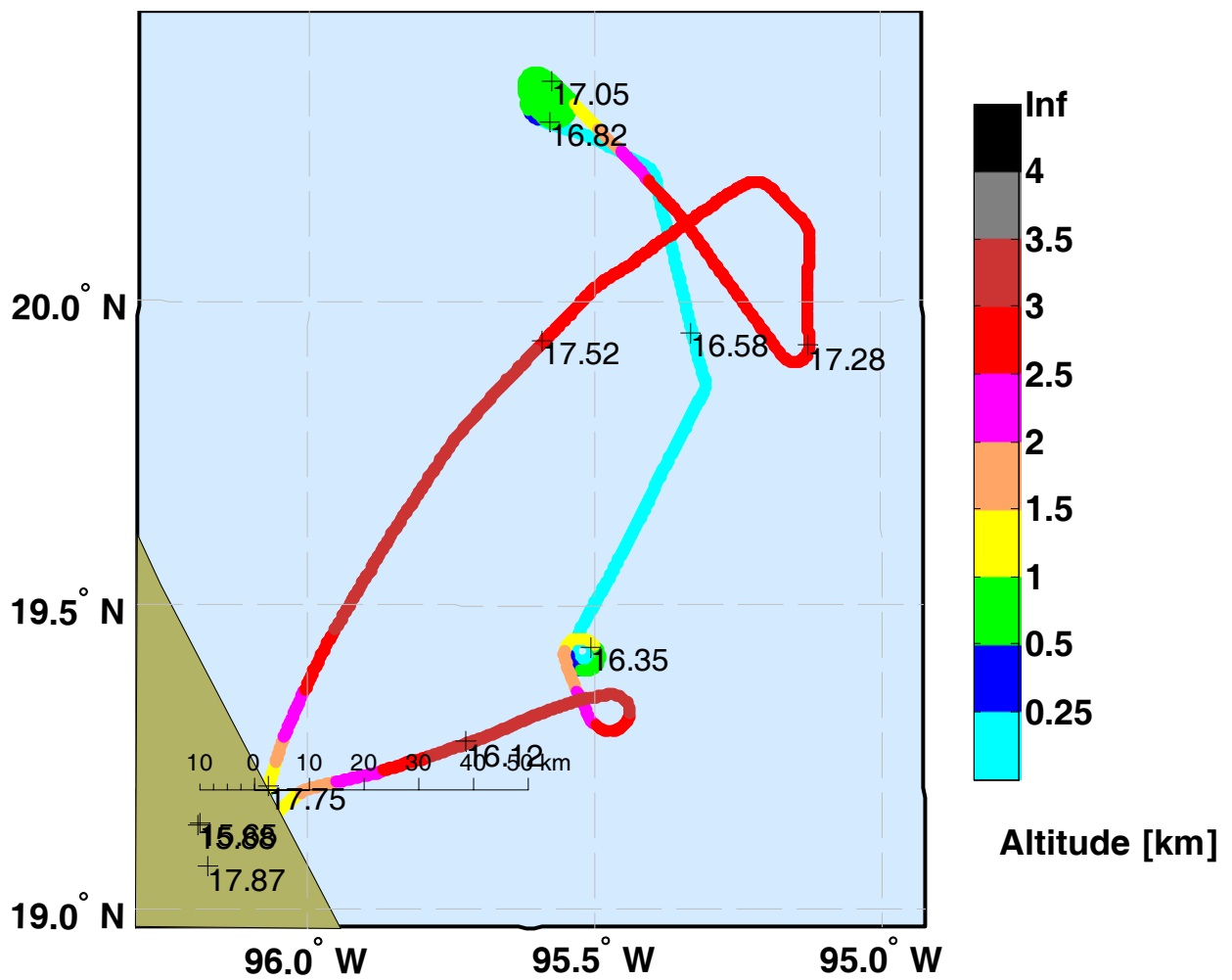


Figure 1. Actual flight track, J31 Flight VER02, 5 March 2006.

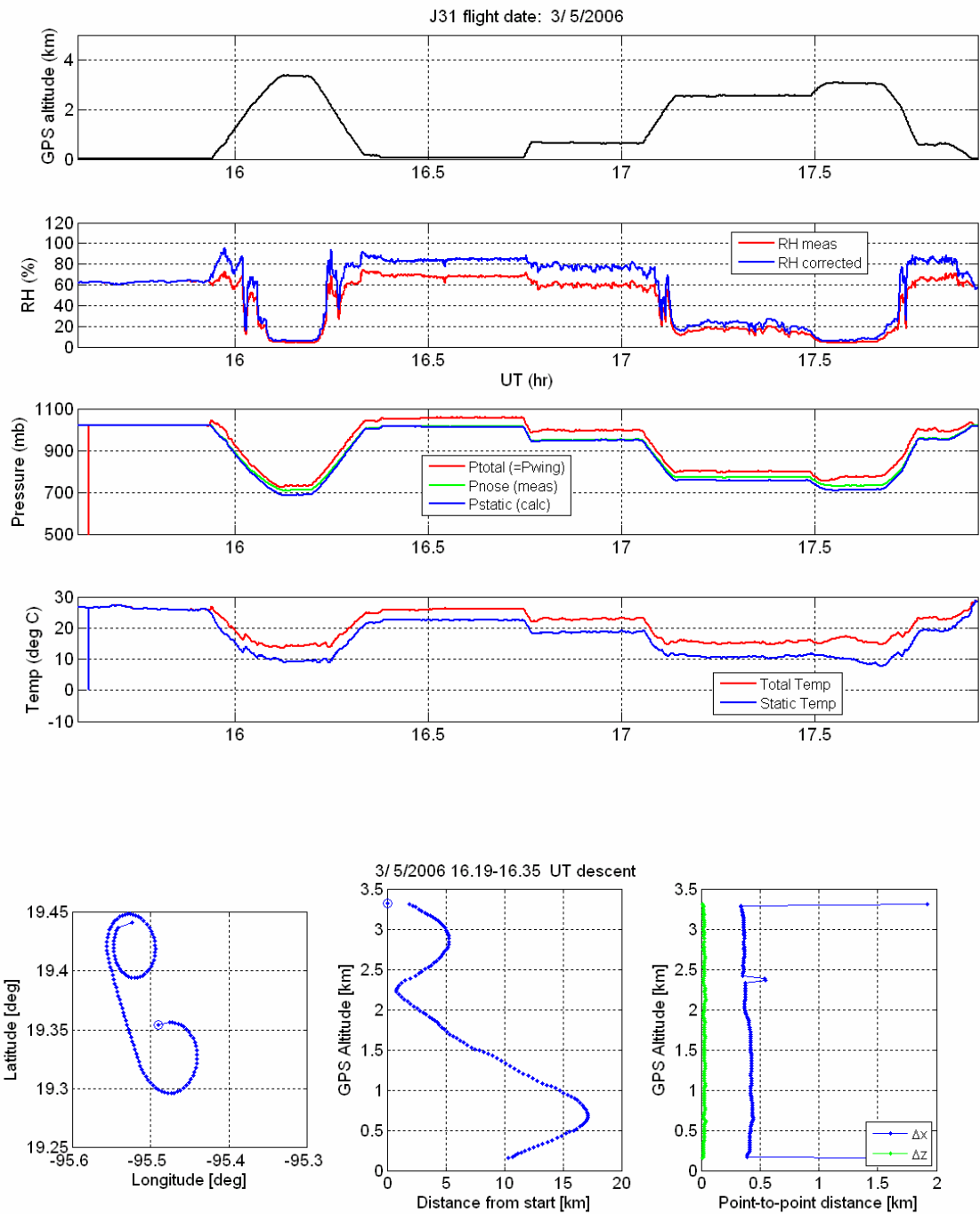


Figure 2. NavMet data, J31 Flight VER02, 5 March 2006.